

ENHANCING AUDIO SIGNALS BY NONLINEAR SPECTRAL OPERATIONS

ABSTRACT OF THE DISCLOSURE

A system and method are disclosed for enhancing audio signals by nonlinear
5 spectral operations. Successive portions of the audio signal are processed using a
subband filter bank. A nonlinear modification is applied to the output of the subband
filter bank for each successive portion of the audio signal to generate a modified subband
filter bank output for each successive portion. The modified subband filter bank output
for each successive portion is processed using an appropriate synthesis subband filter
10 bank to construct a modified time-domain audio signal. High modulation frequency
portions of the audio signal may be emphasized or de-emphasized, as desired. The
modification may be applied within one or more frequency bands.